

What is Claimed is:

1. A wireless node, comprising:
a detachable antenna including:
5 an antenna element of at least an 802.11a lower band, and
an antenna identifier that identifies the detachable antenna including the
antenna element of at least the 802.11a lower band, and
a base unit coupleable to the detachable antenna, including:
an antenna detector that detects the antenna identifier,
10 802.11a circuitry including at least 802.11a lower band circuitry,
a first mode enabling 802.11a lower band communications of the wireless
node if the antenna detector detects the antenna identifier, and
a second mode disabling 802.11a lower band communications of the
wireless node if the antenna detector fails to detect the antenna identifier.
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2. The node of claim 1, wherein the antenna identifier includes at least one passive
component.
3. The node of claim 1, wherein the antenna identifier includes at least one active
20 component.
4. The node of claim 1, wherein the antenna identifier includes at least one
mechanical component.
- 25 5. The node of claim 1, wherein the antenna identifier includes at least one
optoelectronic component.
6. The node of claim 1, wherein the antenna detector detects the antenna identifier at
least electronically.
- 30 7. The node of claim 1, wherein the antenna identifier includes a switch activator, the
antenna detector includes a switch, and the antenna detector detects the antenna identifier
when the switch activator activates the switch.

8. The node of claim 1, wherein the antenna identifier includes a tag, the antenna detector includes a tag detector, and the antenna detector detects the antenna identifier when the tag detector detects an acceptable value from the tag.

5 9. The node of claim 1, wherein the antenna detection is done at least by analog electronics.

10. The node of claim 1, wherein the antenna detection is done at least by digital electronics.

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11. The node of claim 1, wherein the antenna detection is done at least mechanically.

12. The node of claim 1, wherein the antenna detection is done at least optoelectronically.

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13. The node of claim 1, wherein the antenna identifier and the antenna detector communicate electronically, and an identification electronic signal communicated by the antenna identifier is modulated in frequency.

20 14. The node of claim 1, wherein the antenna identifier and the antenna detector communicate electronically, and an identification electronic signal communicated by the antenna identifier is modulated in time.

25 15. The node of claim 1, wherein the antenna identifier and the antenna detector communicate electronically, and an identification electronic signal communicated by the antenna identifier is modulated in pulse width.

30 16. The node of claim 1, wherein the antenna identifier and the antenna detector communicate electronically, and an identification electronic signal communicated by the antenna identifier is modulated in code (CDMA)

17. The node of claim 1, wherein the antenna identifier includes a load, the antenna detector includes a load detector, and the antenna detector detects the antenna identifier when the load detector detects an acceptable value from the load.

18. The node of claim 17, the load is at least partly passive.

19. The node of claim 17, the load is at least partly active.

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20. The node of claim 1, wherein the antenna identifier includes a digital device, the antenna detector includes a digital detector, and the antenna detector detects the antenna identifier when the digital detector detects an acceptable signal from the digital device.

10 21. The node of claim 20, wherein the antenna detector detects the antenna identifier via bi-directional communication between the antenna identifier and the antenna detector.

22. The node of claim 20, wherein the antenna detector detects the antenna identifier via one way communication from the antenna identifier to the antenna detector.

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23. The node of claim 20, wherein the digital information of the acceptable signal is at least partly encrypted.

20 24. The node of claim 20, wherein the digital information of the acceptable signal is at least partly unencrypted.

25. The node of claim 20, wherein an external event triggers at least one of: the antenna detector detecting the antenna identifier and the antenna detector failing to detect the antenna identifier.

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26. The node of claim 20, wherein an internal event triggers at least one of: the antenna detector detecting the antenna identifier and the antenna detector failing to detect the antenna identifier.

30 27. The node of claim 20, wherein a single-shot trigger signal triggers at least one of: the antenna detector detecting the antenna identifier and the antenna detector failing to detect the antenna identifier.

28. The node of claim 20, wherein a repetitive trigger signal triggers at least one of: the antenna detector detecting the antenna identifier and the antenna detector failing to detect the antenna identifier.
- 5 29. The node of claim 28, wherein the repetitive trigger signal is repetitive for a limited number of occurrences.
30. The node of claim 1, wherein the wireless node includes an access point.
- 10 31. The node of claim 1, wherein the wireless node includes a router.
32. The node of claim 1, wherein the wireless node includes a gateway.
33. The node of claim 1, wherein the wireless node includes a modem.
- 15 34. The node of claim 1, wherein the wireless node includes a client adapter.
35. The node of claim 1, wherein the wireless node includes a bridge.
- 20 36. The node of claim 1, wherein the detachable antenna is directly coupled to the base unit.
37. The node of claim 36, wherein the detachable antenna is directly coupled to the base unit via a coaxial connector.
- 25 38. The node of claim 36, wherein the detachable antenna is directly coupled to the base unit via at least one conductor in one connector.
39. The node of claim 36, wherein the detachable antenna is directly coupled to the base unit via at least one conductor in more than one connector.
- 30 40. The node of claim 36, wherein the detachable antenna is directly coupled to the base unit via one PCB connector with at least one conductor.

41. The node of claim 1, wherein the detachable antenna includes a whip antenna.
42. The node of claim 1, wherein the detachable antenna includes a PCB antenna.
- 5 43. The node of claim 1, wherein the detachable antenna includes a patch antenna.
44. The node of claim 1, wherein the detachable antenna is remotely coupled to the base unit.
- 10 45. The node of claim 44, wherein the detachable antenna is remotely coupled to the base unit via a cable.
46. The node of claim 45, wherein the cable has a coaxial connector.
- 15 47. The node of claim 1, wherein the base unit is coupled to an antenna missing the antenna identifier.
48. The node of claim 47, wherein base unit is in the second mode.
- 20 49. The node of claim 1, wherein the base unit is coupled to the detachable antenna.
50. The node of claim 49, wherein base unit is in the first mode.
51. The node of claim 1, wherein powering off the base unit causes the base unit to enter the second mode.
- 25 52. The node of claim 1, wherein decoupling the detachable antenna from the base unit causes the base unit to enter the second mode.
- 30 53. The node of claim 1, wherein the detachable antenna is remotely powered.
54. The node of claim 53, wherein the detachable antenna is remotely powered from the base unit.

55. The node of claim 1, wherein the detachable antenna includes a dipole antenna.

56. The node of claim 1, wherein a time period between a first attempt and a second attempt for the antenna identifier to be detected by the antenna detector is a cyclic interval.

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57. The node of claim 1, wherein a time period between a first attempt and a second attempt for the antenna identifier to be detected by the antenna detector is a random interval.

10 58. The node of claim 1, wherein a time period between a first attempt and a second attempt for the antenna identifier to be detected by the antenna detector is a pseudorandom interval.

15 59. The node of claim 1, wherein a time period between a first attempt and a second attempt for the antenna identifier to be detected by the antenna detector is a deterministic interval.

20 60. The node of claim 1, further comprising an antenna detection algorithm following a state diagram with at least the following states: no connection state, authentication state, antenna with identifier detected state, polling antenna state, and bad antenna state.

61. The node of claim 60, wherein the polling antenna state is repetitive

25 62. The node of claim 61, wherein the polling antenna state is repetitive and limited to a fixed number of occurrences.

63. The node of claim 60, wherein the polling antenna state has a single occurrence.

30 64. The node of claim 60, wherein the state machine permits the polling antenna state to be disabled.

65. The node of claim 1, further comprising an antenna detection algorithm following a state diagram with at least the following states: no connection state, authentication state, antenna with identifier detected state, and bad antenna state.

66. The node of claim 1, wherein 802.11a lower band communications of the wireless node are disabled if power in the detachable antenna is too high.

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